

## Comparing Perfect Competition and Monopoly

The productivity and cost curves of a firm are the same regardless of the degree of competition the firm faces in the product market. The shapes of the productivity and cost curves depend on the productivity of resources and the prices the firm pays to acquire those resources. It is on the revenue side of the firm that we find the impact of the type of product market in which the firm sells its good or service.

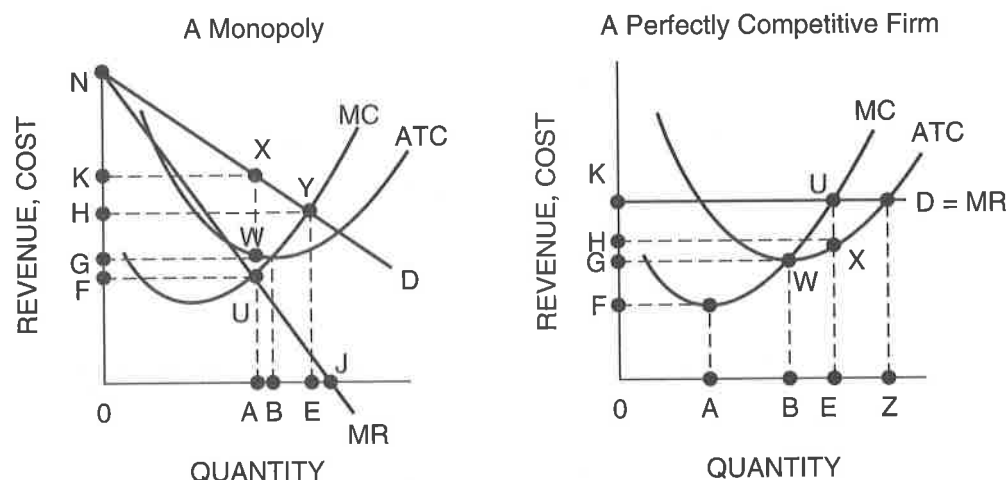
### Part A: A Comparison of Firms

Answer the following questions based on Figure 3-15.1, which shows the revenue and cost functions of a monopoly and a perfectly competitive firm. Assume the monopoly will charge only one price for output (i.e., it does not price discriminate).



Figure 3-15.1

### Revenue and Cost Functions for a Monopoly and a Perfectly Competitive Firm



*Note:* The values of coordinates are not the same in both graphs. For example, the value of  $OK$  is greater in the monopoly graph than is the value of  $OK$  in the graph of the competitive firm.

- The monopoly will maximize its total profit by producing \_\_\_\_\_ units of output.  
(A)  $OA$  (B)  $OB$  (C)  $OE$  (D)  $OJ$
- The perfectly competitive firm will maximize its total profit by producing \_\_\_\_\_ units of output.  
(A)  $OA$  (B)  $OB$  (C)  $OE$  (D)  $OZ$
- The profit-maximizing price for the monopoly is  
(A)  $OF$ . (B)  $OG$ . (C)  $OH$ . (D)  $OK$ .

4. The profit-maximizing price for the perfectly competitive firm is  
(A) 0F. (B) 0G. (C) 0H. (D) 0K.
5. The maximum total profit of the monopoly is shown by the coordinates  
(A) AX. (B) UX. (C) GWXK. (D) 0AXK.
6. The maximum total profit of the perfectly competitive firm is shown by the coordinates  
(A) EU. (B) UX. (C) 0EUK. (D) HXUK.
7. The maximum average profit of the perfectly competitive firm is at output  
(A) 0A. (B) 0B. (C) 0E. (D) 0Z.
8. The marginal profit of the monopoly is \$0 at output  
(A) 0A. (B) 0B. (C) 0E. (D) 0J.
9. The marginal profit of the perfectly competitive firm is \$0 at output  
(A) 0A. (B) 0B. (C) 0E. (D) 0Z.
10. The marginal profit of the perfectly competitive firm is maximized at output  
(A) 0A. (B) 0B. (C) 0E. (D) 0Z.
11. At output 0A, the total cost of the monopoly is shown by the coordinates  
(A) AU. (B) AW. (C) 0AUF. (D) 0AWG.
12. The monopolist will maximize its total revenue at output  
(A) 0A. (B) 0B. (C) 0E. (D) 0J.
13. What price will the perfectly competitive firm charge when it is in long-run equilibrium?  
(A) 0F (B) 0G (C) 0H (D) 0K
14. What area represents consumer surplus when the monopoly maximizes its total profit?  
(A) KXN (B) 0AXN (C) GWXN (D) HYN
15. The profit-maximizing output of the monopoly is \_\_\_\_\_ the output society would like the firm to produce.  
(A) greater than (B) equal to (C) less than
16. The profit-maximizing output of the perfectly competitive firm is \_\_\_\_\_ the output society would like the firm to produce.  
(A) greater than (B) equal to (C) less than
17. Is the perfectly competitive firm in a position of long-run equilibrium?  
(A) Yes (B) No (C) We need more information.

18. Which firm will operate at the minimum point of its ATC curve in long-run equilibrium?

- (A) Only the perfectly competitive firm  
 (B) Only the monopolistic firm  
 (C) Both firms  
 (D) Neither firm

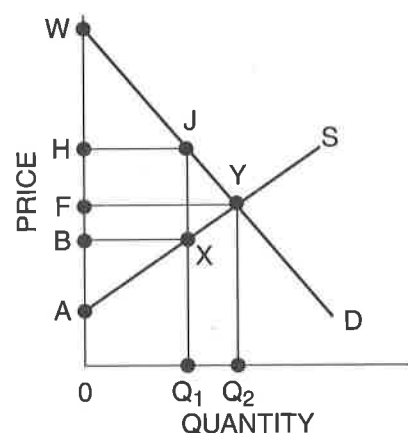
### Part B: A Comparison of Markets

Figure 3-15.2 shows a perfectly competitive market with demand curve  $D$  and supply curve  $S$ . The equilibrium output is  $Q_2$ , and the equilibrium price is  $OF$ . If the market were to become a monopoly, the firm would restrict output to some smaller output such as  $Q_1$ . Answer the questions below Figure 3-15.2.



Figure 3-15.2

#### Comparing Perfect Competition and Monopoly



19. Complete Table 3-15.1 with the coordinates of the variables under each type of market.



Table 3-15.1

#### Comparing Perfect Competition and Monopoly

Market type	Consumer surplus	Producer surplus	Total surplus*
Perfect competition	<b>FYW</b>	<b>AFY</b>	<b>AWY</b>
Monopoly	<b>HWJ</b>	<b>AHJX</b>	<b>AWJX</b>
*Total surplus is also called total welfare and social welfare.			

20. Explain what the triangle  $JXY$  represents.

*This shows the deadweight loss to society from the perfectly competitive market becoming a monopoly. Society loses the total surplus from those units between  $Q_1$  and  $Q_2$  because those units will not be produced if the market is a monopoly.*